

## **INTERIM ARMORED VEHICLE (IAV)**



The Interim Armored Vehicle (IAV) program is a family of medium armored vehicles intended to equip the Army's Interim Brigade Combat Team (IBCT). It is based on the Light Armored Vehicle (LAV) III and will consist of two basic variants, the Infantry Carrier Vehicle (ICV) and the Mobile Gun System (MGS). The ICV is, in turn, the baseline vehicle for eight additional configurations, which are based on the same platform as the ICV. These configurations are the mortar carrier, the anti-tank guided missile vehicle, the reconnaissance vehicle, the fire support vehicle, the engineer squad vehicle, the commander's vehicle, the medical evacuation vehicle, and the Nuclear Biological Chemical (NBC) reconnaissance vehicle.

The Key Performance Parameters (KPP) defined by the Army for all vehicles in the IAV family are: (1) hosting and effectively integrating existing and planned Army Command Control Communication Computer Intelligence Surveillance Reconnaissance C4ISR systems; and (2) transportable in a C-130 aircraft. The ICV and engineer squad vehicle have an additional KPP of being capable of carrying an infantry squad with its individual equipment. The MGS has an additional KPP of being capable of defeating a standard infantry bunker and creating an opening in a reinforced concrete wall with its main armament.

### **BACKGROUND INFORMATION**

The Army initiated the IAV program in FY00 to provide a family of vehicles with the capabilities necessary to support the Army's IBCT. The IBCT is intended to satisfy a requirement for a combined arms team with enhanced strategic deployability. The IBCT is envisioned to be more strategically deployable than existing Army heavy forces, while having greater tactical mobility than existing light forces. While the IBCT is intended to be employable across the full spectrum of combat, the Army envisions its most likely operating environment to be small-scale contingencies in complex and urban terrain against low end to mid-range threat forces.

In November 2000, the LAV III was selected by the Army as the IAV platform. Most of the IAV configurations are assessed by the Army to be production-ready, because the base LAV III vehicle is currently in production for other countries. Developmental work is expected only for the MGS, NBC reconnaissance vehicle, and Fire Support Vehicle (FSV). All other configurations will integrate existing equipment to provide the relevant mission packages. Installation of FBCB2 digital C2 will be accomplished by the Army at user sites after the contractor delivers the vehicles.

## **TEST & EVALUATION ACTIVITY**

IAV T&E activities to date have focused on TEMP development to include development of an Operational Test and Live Fire Test and Evaluation strategy. The Director approved the initial IAV TEMP in November 2000 incorporating the details of the selected contractor's proposal and the LAV III specific configurations. An updated TEMP is expected in the near future.

The TEMP contains provisions for a battalion-size IOT&E that will be conducted with all IAV variants and configurations not requiring significant developmental work.

The requirement for the Comparison Evaluation was waived in the National Defense Authorization Act for FY02 but requires the Secretary of Defense to certify five specific criteria are met.

IOT&E will be conducted with two live IAV companies and one IAV company in simulation, provided the simulation is validated. Additionally, battalion and brigade level combat support and combat service support elements such as reconnaissance, engineer and anti-tank units will participate. This task force will operate under the command and control of a battalion tactical operations center with complete Army Tactical Command Control System (ATCCS) digital C4ISR systems.

It is currently anticipated that all IAV variants and configurations will be available for IOT&E with the exception of the MGS, NBC reconnaissance vehicle, and the FSV. Additionally, the mortar carrier will be available with a dismounted mortar only, as a soft-recoil mortar is necessary for mounted mortar firing. The Army does not currently possess such a mortar. Additional OT events have been planned for those configurations not available for the first IAV IOT&E.

The initial IAV Live Fire Test and Evaluation strategy calls for testing three MGSs, three ICVs, and one each of the ICV-based configurations. The scope of the full-up, system-level tests call for up to 120-test events spread among up to ten test vehicles.

Live Fire Testing begins 2QFY02 and the IAV IOT&E is currently scheduled to begin in 2-3QFY03.

## **TEST & EVALUATION ASSESSMENT**

The IAV T&E program will be inherently challenging due to the need to test and evaluate ten different variants and configurations, each of which performs a different combat function. The Army has proposed a robust test program that includes all but three of the variants in the first IAV IOT. This will allow evaluation of system and unit effectiveness and suitability. The scope of testing for other variants depends on the extent to which common issues can be resolved in the first IOT. Additionally, each platform's performance will be, in large measure, dependent upon the successful integration of a variety of mission packages. Of particular interest will be the integration and performance of FBCB2 digital command and control. The organizational and operational concepts for the IAV-equipped IBCT are, to a significant degree, based upon the information superiority presumed to be provided by FBCB2 as well as the other ATCCS systems. Additionally the successful integration of Government Furnished Equipment mission packages such as the M707 Striker into the Fire Support Vehicle and the Long Range Acquisition System into the Reconnaissance Vehicle will be essential to the IAV program.

The development of the MGS will likely be the greatest program challenge. The integration of the 105 mm main gun on the LAV III chassis is, to date, largely unproven. Since the MGS will not be

ready for fielding with the first brigades, the Army is pursuing a modification to the Tube launched Optically tracked Wire guided missile to give it enhanced capability against bunkers.

The Army's assumption that the majority of the selected IAV configurations and variants are production ready is based upon the LAV III chassis only and does not consider the total system integration of mission packages for each configuration, to include FBCB2. Much of the planned T&E effort will necessarily focus on system integration issues.

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